catalytic dehydration reaction, the methanol being converted to dimethyl ether according to the reaction scheme:

$$2\ CH_3OH \Leftrightarrow DME + water,$$

using a catalytic converter on board of a vehicle, wherein the dehydration temperature is between 200°C and 450°C and wherein the pressure is between 10 and 400 bar.

8. (New) A method of operating a compression ignition engine on a fuel obtainable by the process of claim 7, by injecting the fuel into the combustion chamber of the engine and combusting the fuel with air, wherein the concentration of methanol is between 5 and 50% w/w and wherein the air for combustion is preheated to a temperature of at least 60°C.

9. (New) The method of claim 8, wherein the combustion air is preheated to a temperature of at least 100°C.

10. (New) The method of claim 8, wherein the combustion air is preheated by exchange with the exhaust gas.

11. (New) The method of claim 8 applied to vehicles, ships, trains or in stationary diesel engines for power and heat supply.